



Consumer Federation of America



THE CONTINUING ABUSE OF MARKET POWER BY THE CABLE INDUSTRY:

**RISING PRICES, DENIAL OF CONSUMER CHOICE, AND
DISCRIMINATORY ACCESS TO CONTENT**

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EXECUTIVE SUMMARY

Eight years after the passage of the Telecommunications Act of 1996, which deregulated cable prices, this study shows that cable operators still possess market power in the multichannel video market. The result is price increases that far exceed the rate of inflation – almost three times faster than inflation in recent years –and the continued restriction of consumer choice to a small number of ever larger, ever more expensive bundles. The cost imposed on consumers by this abuse of market power is between \$4.5 and \$6 billion per year, compared to what prices would be in a competitive market.

Cable operators attempt to obscure the existence and abuse of market power with two arguments. First they claim that programming costs explain the massive increase in the price of basic and expanded basic service. Second, they claim that consumers are getting much greater value for their dollar; so that quality adjusted prices have declined. Neither claim stands up to close scrutiny.

EXERCISE OF MARKET POWER ON THE SUPPLY SIDE

Prices

Econometric studies by the General Accounting Office and the Federal Communications Commission show that where cable faces direct head-to-head overbuilder competition the price of cable service is much lower.

- A recent GAO report found that in situations where cable faces competition overbuilders, prices are 15% lower. Econometric analyses have consistently found this result of a decade. Unfortunately, less than two percent of cable customers enjoy the benefits of that competition.
- A recent GAO analysis found that a cable system owned by a large national operator has prices that are over 5 percent higher than if it is not. FCC econometric models show even larger effects.
- When the FCC models add in a specific variable for regional clustering, a dramatic trend in the industry, they find that clustering has an added effect of further raising price.
- The vast majority of cable subscribers are now served by one of a handful of huge-multiple system operators that have expanded their grip on the industry through mergers and clustering, who adds as much as an additional 8 percent to the consumers bill.

Market Structure

Cable's market power stems from a lack of effective competition. Even at the national level, the multichannel video market has become concentrated; the problem is much greater at the local level.

- In markets where 98 percent of Americans live, a single cable operator dominates multichannel video distribution with a market share that exceeds 80 percent.

The largest cable operators never compete with one another. Instead they have grown to huge national firms through mergers using swaps of systems to create regional clusters that undermine the ability of overbuilders to launch competition. Large operators and clustered systems have more muscle to thwart competition and impose price increases.

- They can distribute programming terrestrially and refuse to make it available to competing distribution systems. This is becoming increasingly important as vertically integrated companies dominate "must have" regional sports programming.
- They can extract exclusivity deals from independent programmers, thereby denying programming to competing distribution media.
- They have more leverage over local governments to obstruct the entry of overbuilders

Direct Broadcast Satellite does not have a significant or substantial ability to discipline cable pricing abuse. Satellite is a niche product that has had its greatest success in areas where cable was unavailable or among customers who wanted high quality digital services with large numbers of channels (before cable could offer such a package).

- Cable has surpassed satellite in the number of subscribers to digital video service.
- It is bundling high-speed Internet and basic cable service to further erode the ability of satellite to compete.

Discrimination in Access

Cable operators discriminate against unaffiliated service providers in both the video and the high-speed Internet product space. Cable operators are 64 percent more likely to carry networks that they own, than the networks provided by others. Broadcasters have used their retransmission rights to also gain preferential carriage deals for their shows. As a result, independent programmers are placed at a severe disadvantage.

Cable operators dominate the residential market for advanced high-speed Internet access, with an 83 percent market share. By refusing to allow unaffiliated Internet Service Providers to compete for Internet access customers over the cable modem platform, cable operators have foreclosed a critical high-end market, which dramatically reduces competition for Internet service. Virtually no voluntary carriage agreements have been signed by cable operators.

Cash Flow

A close look at cable's financial operations shows that rising costs cannot explain the rising price of traditional video services.

- In the aggregate, price increases far exceed the increase in programming costs.
- An allocation of non-programming operating costs based on historical patterns shows that operating cash flow from traditional video services has increased by approximately 70 percent on a per subscriber basis since the passage of the Telecommunications Act.

Sale of advanced services, digital tiers and high speed Internet, which were the motivation behind the recent system upgrades, has skyrocketed. The upgrades are paying for themselves.

- High-speed Internet is now the second largest income stream and digital tiers are the third largest streams of income for the cable operators, bringing in a combined \$10 billion per year.

The Shape of Market Power on the Demand Side

Cable operators claim that adding more channels to their bundles increases the value of the package. Unfortunately, consumers are not given a choice of which channels to purchase. They must take nothing, almost nothing (basic) or almost everything (expanded basic). With the addition of the digital tier, they have another option, but cable operators have been moving popular channels (like HBO) to the digital tier to drive consumer bills up even farther.

Because the cable operators restrict consumer choice to this small set of bundles, it is impossible to know how consumer welfare has changed and wrong to claim that every show adds equally to consumer value.

- The average consumer watches about 17 channels regularly, but the bundles have four times that number.
- The top twenty shows account for approximately three quarters of all viewing.
- Almost nobody watches the bottom 30 channels in the bundle. Only about one out of every 250 households where these shows are available watches them on any given day.

The economics literature has long recognized that bundling by firms possessing market power can be anti-consumer and anticompetitive. When different consumers have strong preferences for different channels, putting them into bundles forces each consumer to pay for many channels he or she does not want in order to get the channels he or she does want.

A detailed analysis of one of the most popular and expensive channels, ESPN, which has been a focal point of controversy, shows that approximately four-fifths of cable subscribers would not pay the price of ESPN if they were given a choice. By forcing consumers to pay for the show in a bundle, wealth is transferred from consumers to cable operators (and the programmer).

A recent analysis that claims that the BLS over states price increase and that prices have fallen on a quality adjusted basis is riddled with analytic and measurement errors. The analysis double counts the quantity of programming and vastly overvalues the shift from viewing over the air to viewing cable. Watching an hour rerun of the same show on cable, instead of a broadcast station is assumed to increase consumer value by one hour, even though the exact same show is watched. Correcting these errors shows that the BLS cable price index yields, at best a lower limit on the quality adjusted price increases.

- In contrast to the 15 percent real decline that the NCTA analysis claims, the BLS shows a 27 percent increase. The actual quality adjusted price increase could be as high as 40 percent.

The embedded base of excess prices and the entrenched market power of the cable operators, reinforced against satellite and extending into the high-speed Internet, confront policy makers with a critical problem. After two decades of abuse, and eight years after the Telecom Act of 1996, it is clear that policymakers made a mistake in deregulating cable. It is time for policymakers to take steps to promote real competition and protect consumers from further abuse.

APPENDIX A

I. INTRODUCTION

A. PURPOSE

Proceedings at the Federal Communications Commission (FCC),ⁱ a series of General Accounting Office (GAO) reportsⁱⁱ and contract negotiations between cable operators and programmersⁱⁱⁱ have stimulated an unprecedented round of finger pointing and release of data about the cable television industry. The goal is to justify and/or place blame for the dramatically increasing price of cable service.^{iv} Cable operators claim the programmers made them do it. Programmers have fired back, suggesting that basic rates have been increasing to support the rollout of advanced video and new, non-video services. The finger pointing drives home a simple point: consumers are paying a dramatically higher price for their monthly cable service. Or, are they?

Several of the existing industry studies are framed as responses to consumer analyses that have documented the abuse of market power by cable operators. Comcast^v and the National Cable Telecommunications Association (NCTA)^{vi} assert that when consumer advocates complain about the total price of cable service, they are failing to take into account that the monthly bill includes more networks and are confusing real prices with nominal prices. NCTA goes so far as to offer a new approach to indexing cable prices as an alternative to the Bureau of Labor Statistics (BLS) cable Consumer Price Index (CPI). The FCC's *Tenth Annual Report (In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming)* cites this analysis as further support for its conclusion that competition in the multichannel video market is robust and repeats the industry arguments.^{vii}

This paper shows that the most frequent complaint voiced by consumer advocates – that cable “rates have risen and continue to rise almost three-times faster than inflation,”^{viii} – is correct. The consumer advocate comparison of cable rates to inflation states the numerator and the denominator of the real fraction in a fashion that is more meaningful to consumers and policymakers because it gives the reference points. Moreover, the paper argues that, if anything, the BLS cable price index is more likely to be understating price increases than overstating them.

The bottom line is that the market power-based abuse of consumers by cable operators has been growing since the passage of the Telecommunications Act of 1996. After two decades of blatant abusive pricing, cable operators have begun to encounter some resistance, so increases may slow, but that does not mean the abuse will be reduced or eliminated. In response to criticism, the cable operators have simply launched new bundling strategies that shift the focal point of price increases and anticompetitive harm to other areas.

B. THE FCC'S FAILURE TO ASK THE HARD QUESTIONS

The FCC's Annual Reports have steadfastly refused to address the serious questions raised about the cable market in a rigorous manner, but the *Tenth Annual Report* sinks to new lows. The FCC cannot even figure out how many cable subscribers there are. The two sources on which it relies for data (it never generates its own independent data) disagree by almost five million subscribers. In response, the FCC takes a most remarkable approach – it uses both sets of numbers – the lower figure for its financial analysis and the higher figure for its assessment of

competing technologies (contrast Tables 1 and 4 to Table B-1). The *Ninth Annual Report* used the higher figure for both the financial and the competitive assessment analyses.

As with most analyses at the Commission these days, slipping the lower figure into this report may be strategically motivated. If the FCC uses the higher figure and growth persists at the rate implicit in those figures, by this time next year cable will be well above 70 percent of the TV market. This is a threshold that would trigger petitions to the FCC to regulate cable. If the FCC shifts to the lower figure, or claims the conflict between the two creates uncertainty, the regulation trigger would be put off several years. Here, as elsewhere, the failure of the FCC to develop solid independent data may harm consumers substantially.

The FCC recognizes the dramatic increase in cable prices, but, like the industry, it emphasizes that “concurrently with these rate increases, however, the number of video and non-video services increased, including a substantial increase in the number of video channels, increased use of cable (as measured by a substantial increase in cable viewership), and the addition of advanced service offerings which, of course, are paid for separately by consumers.”^{xix} Unfortunately, the FCC admits that its approach to measuring prices cannot address the fundamental issue, since it is based on an assumption that this paper shows to be doubtful – “Per channel rates, however, value all additional channels the same even if consumers do not want new channels that are added to cable systems.”^x This paper shows that such an assumption is contradicted by consumer behavior. The cable video industry’s bundling harms consumers.

The FCC regurgitates the industry claim that rising programming costs have driven basic rate increases, but does not examine the contradictory evidence embedded in its own numbers. For example, it notes that programming costs went from \$7.5 billion in 1998 and will exceed \$9 billion in 2003.^{xi} It later cites a figure of \$9.2 billion for 2002.^{xii} Over the 1998-2003 period, revenues for basic and expanded basic services increased by \$7.3 billion. Thus, three quarters of the price increases cannot be explained by rising programming costs. Price increases exceeded programming cost increases by more than \$5 billion.

The challenge of explaining away the excessive rate increase for basic and expanded basic service is made all the more difficult in light of the dramatic increase in revenues from advanced services. The FCC notes that dramatic rise of advanced service revenues citing “Kagan World Media reports it was high-margin, high-speed-data services that drove operating cash flow growth in 2002.”^{xiii} Moreover, it notes that Kagan sees this trend growing in 2003, since “they expect high-speed data service ‘to contribute 12.4% to total residential revenue, the largest piece of the revenue pie after basic service.’”^{xiv} Digital tier services are the third largest revenue stream for cable operators, having surpassed local advertising for the first time in 2003.^{xv} The fact that these two advanced services now bring in \$10 billion in revenue should force the Commission to challenge the claim that basic and expanded basic prices had to rise to pay for the upgrade of the system. This issue, which the Commission has never addressed, is a central theme of this report.

The FCC’s report goes on to claim that the bundling of advanced services with basic service “may provide some discount on basic or expanded basic,”^{xvi} a proposition it does not even attempt to analyze, let alone prove. This paper shows that this bundling is anti-competitive.

The FCC notes several cable industry milestones in this report, but fails to follow up on them. For example, it notes that the national Multichannel Video Programming Distribution (MVPD) market exceeds the threshold for a moderately concentrated market as defined by the Department of Justice/Federal Trade Commission *Merger Guidelines*. The FCC hastens to add that “it is unclear whether this is a potential competitive problem, because the delivery market is local, not national and because the main competitors to cable in both the upstream and downstream markets continue to grow in size.”^{xxvii} This observation is not comforting for several reasons.

As has traditionally been the case, the FCC makes no effort to assess the level of concentration in the local market. If it did so, it would find that local MVPD markets are generally six times as concentrated as the national market on which it focuses.^{xxviii} Here the FCC encounters another contradiction. It continues to maintain that the clustering strategies of large multiple system operators might benefit consumers,^{xxix} even though the Commission’s own analysis has consistently shown that clustering results in higher prices.^{xxx}

While it is true that the MVPD market is expanding, the FCC fails to note that its competitive assessment analysis shows that cable operators added more subscribers than all the other MVPD competitors combined.^{xxxi} (Of course, the FCC may erase this observation by switching the numbers next year.) Moreover, the FCC fails to note that cable surpassed satellite in the number of digital subscribers for the first time in 2003.^{xxii} Thus, the competitive threat from satellite that the FCC claims should ease our concern about concentration in the cable market may be subsiding, if it ever existed. In fact, this paper reviews the evidence that satellite has failed to discipline cable’s pricing abuse.

The FCC’s simplistic parroting of the industry arguments and failure to conduct rigorous, independent analysis continues to disserve consumers. As cable prices mount and the industry extends its market power into new areas, “congress and American consumers deserve a better effort from the FCC.”^{xxiii}

II. THE SUPPLY SIDE

A. MARKET POWER 101

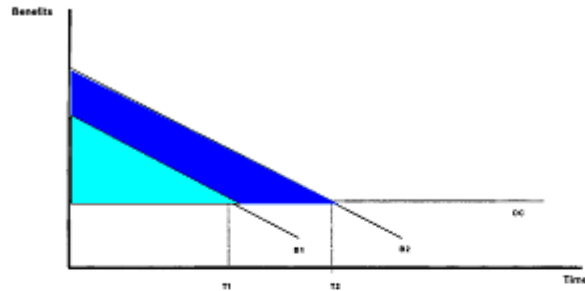
All of the industry studies, as well as the FCC report, ignore the fundamental public policy issues raised by the consumer analysis. Simply put, every dog has his day and every monopolist has his profit-maximizing price. Unlike the hapless canine, however, who goes back to a dog’s life when his day is done, when the monopolist hits his profit-maximizing price, he goes on collecting excess profits. The abuse of consumers persists. What the cable industry economists have done in their recent papers defending cable industry prices is to focus on the scraps of consumer surplus left on the table by cable operators and ignore the submerged danger, the transfer of wealth and deadweight efficiency loss that result from the abuse of market power.^{xxiv}

Launching from the simple observation that every monopolist leaves a little surplus in consumers’ pockets, the cable industry analyzes the tip of the market power iceberg (see Exhibit

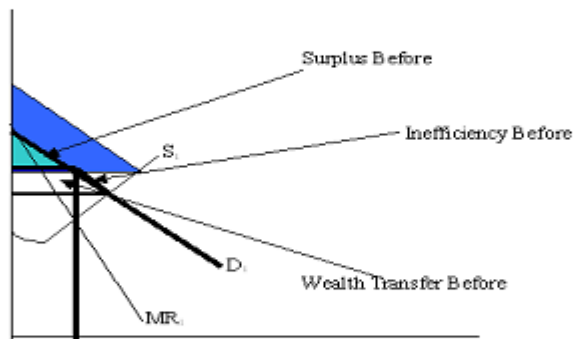
1a).^{xxv} The shaded area in Exhibit 1a is the focal point of the NCTA paper. Consumer surplus (or

EXHIBIT 1: Consumer Surplus

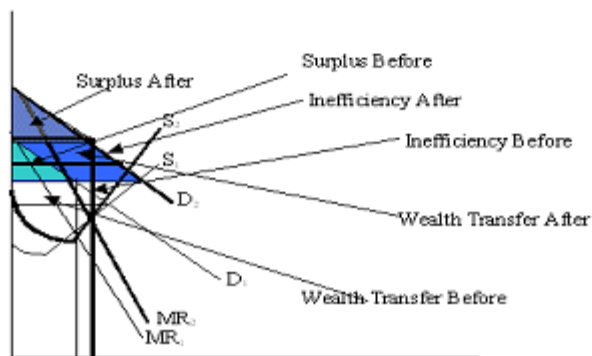
a) NCTA'S Simplistic Analysis



b) Consumer surplus is the tip of the market power iceberg



c) Change in supply and demand with market power persisting



consumer benefits as the paper calls them) is measured as the difference between the value of a service to the consumer (as indicated by the demand curve) and the price the consumer pays for the service. If the value exceeds the price, the consumer buys the product.

Exhibit 1b places the consumer surplus analysis in the framework of the complete picture of cable pricing^{xxvi} as a classic diagram of the exercise of market power over price.^{xxvii} It is well known in economics that the monopolist sets his price at the point where marginal revenue equals marginal cost. Even at that price there are consumers who are willing to pay the price because the value of the service exceeds the price for them, but consumers are still paying too high a price for the service. The monopolists have captured part of the consumer surplus and transferred it to their pockets (wealth transfers). Also, there are some consumers who give up cable or do not take it, when they would have if the price had been at a competitive level. Their loss is a deadweight efficiency loss. Because the elasticity of demand for cable service is low, wealth transfers are large relative to efficiency losses.

The monopolist can do various things to increase his profits when he hits the profit-maximizing price (see Exhibit 1c).^{xxviii} He can stimulate demand by adding value or by bundling. He can shift the supply curve by lowering his cost or changing his cost structure (and pocket an extra share of the cost savings because he does not face competition). Either or both of these may appear to be welfare enhancing because the quantity consumed increases, but the abuse actually may be increasing on a relative basis because more consumer surplus is being extracted.^{xxix} The relative size of the effects depends on the specific supply and demand curves. This is an empirical question. As depicted in Exhibit 1c, this paper demonstrates that both the total profit and the rate of profit on traditional video services have increased since the passage of the 1996 Act.

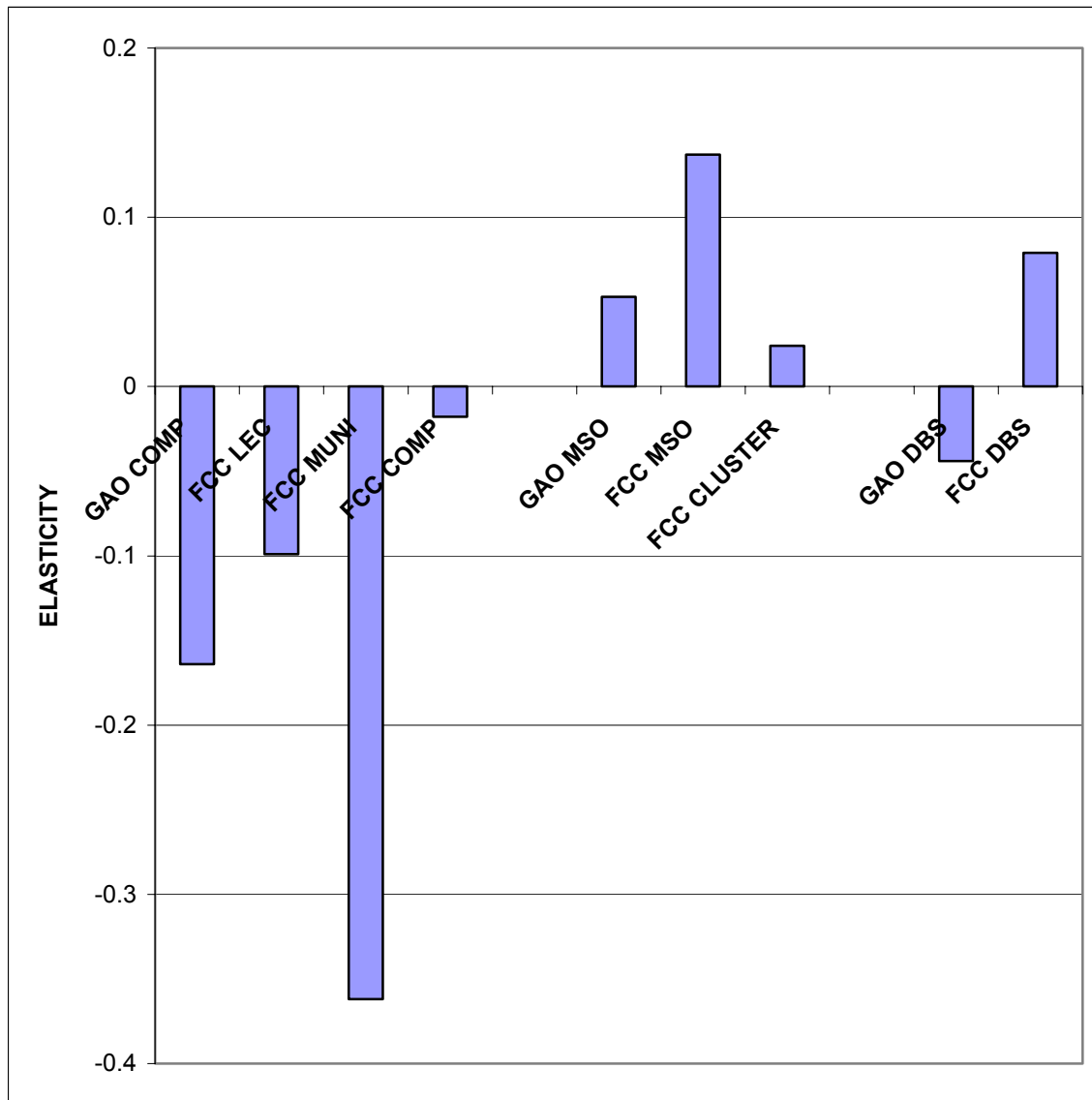
B. GAO'S VIDEO MARKET STRUCTURE ANALYSIS

The critical first question that must be answered is simple – is there evidence that market power is being exercised on the supply side? The GAO provides an affirmative answer. The GAO report affirms each of the supply-side problems of the multichannel video market that has afflicted the American public since the industry was prematurely deregulated in 1984 and further deregulated in 1996. Exhibit 2 shows the elasticities for dummy variables measuring various structural characteristics that affect the extent of competition, which were included in the regression analyses conducted by the GAO and the FCC.

1. Horizontal Market Power

Head-to-head, wireline competition is the only market structure feature that significantly disciplines monopolistic pricing. In its most recent report, the GAO finds that head-to-head, wireline competition between cable operators lowers prices by 15 percent for basic and expanded basic service.^{xxx} Its earlier report had found a 17 percent difference.^{xxxi} Ironically, the *Tenth Annual Report* notes that the first report on cable competition found that head-to-head competition lowered prices by 16 percent.^{xxxii} Recent FCC econometric models, which identified three types of head-to-head competitors (local exchange carriers (LECs), publicly owned systems (munis) and other private overbuilders (comp)), have consistently found large price effects from head-to-head, wireline competition.^{xxxiii} Unfortunately, less than two percent of American

EXHIBIT 2:
Impact Of Market Structure Characteristics On Monthly Rates
 (Regression Coefficients, dummy variables)



Sources: Federal Communications Commission, *Report on Cable Prices*, April 4, 2002, Attachment D-1; General Accounting Office, *Issues Related to Competition and Subscriber Rates in the Cable Television Industry*, October 2003, Appendix IV, Table 3.

households enjoy the benefit of head-to-head, wireline competition.^{xxxiv} The result is an abuse of market power that costs the American public about \$4.5 billion per year in cable rates alone.^{xxxv}

Bigger monopolies are worse when it comes to consumer prices. In the GAO analysis, if a cable system is part of a large national operator, its prices are 5.4 percent higher than if it is not.^{xxxvi} The GAO called this horizontal concentration. FCC econometric models have been finding this to be the case for several years, with even larger effects of being part of a multiple system operator (MSO).^{xxxvii} When the FCC models add in a specific variable for regional clustering, a dramatic trend in the industry, they find that clustering has an added effect of further raising price.^{xxxviii} Being served by one of the mega-multiple system operators, who have been expanding their grip on the industry through mergers and clustering, drives prices higher by more than 5 percent and perhaps as much as 8 percent. Thus, there could be as much as an additional \$1.5 billion in consumer savings that could be wrung out of the cable market if it were deconcentrated.

The important implication is that the theory used to allow large cable operators to become larger is not supported by the empirical evidence.^{xxxix} That theory claimed that the combination of larger, clustered systems would create efficiency-based cost savings that would be passed on to the public because one big monopolist is no worse than two, contiguous smaller ones. Since large incumbents never overbuild one-another and compete, this theory claimed there was little to be lost. The econometric evidence suggests that there is considerable harm. It turns out that large operators and clustered systems have more muscle to thwart competition and impose price increases. They can distribute programming terrestrially and extract exclusivity deals from independent programmers, thereby denying programming to competing distribution media (overbuilders and satellite). They have more leverage over local governments to obstruct the entry of overbuilders.

The large incumbent cable operators never competed by overbuilding a neighbor, they grow by merger. Policymakers surrendered to the cable urge to merge too easily. If cable operators knew they could not grow through mergers and really cared about size, they might compete by overbuilding one another.^{xl}

Intermodal competition – between cable and satellite – does not effectively discipline cable’s pricing power. In contrast to head-to-head, wireline competition, which lowers cable bills by \$5 per month, competition from satellite lowers bills by a mere \$.15, according to the GAO.^{xli} In other words, head-to-head, wireline competition is almost 40 times as effective as intermodal competition when it comes to price. In fact, in the GAO report, even satellite’s very modest pricing effect is not statistically significant by traditional standards. It fails at the 5 percent level of significance. The FCC’s econometric analysis does not find even this small price effect. It finds a statistically significant effect in the opposite direction.^{xlii}

To the extent that satellite has any competitive effect, it drives cable operators to offer more channels, but this effect stems from the decision of satellite to offer local programming. Where satellite offers local programming, cable operators offer about 5.4 percent more cable channels. Thus, satellite appears as a niche product that cannot discipline cable pricing abuse for the vast majority of cable subscribers who take only basic and expanded basic.^{xliii}

Exhibit 3 explores the implications of the most recent econometric findings on horizontal market power. Using the traditional measure of market power and the standard measure of the pricing abuse that results – the Lerner Index – it explores the relationship between the number and size of firms in cable markets and the mark-up of price over cost. A more advanced approach uses the level of concentration in the market (as measured by the HHI) in the Lerner Index instead of the simple number of firms. The mark-up of price above cost is inversely related to the extent of competition and the market elasticity of demand. The more competitive the market and the more elastic the demand, the less the ability to increase price. The analysis uses the econometric estimate of the elasticity of demand and the implicit levels of concentration. The econometric estimate of a 20 percent mark-up from a lack of head-to-head competition and horizontal concentration is consistent with, even a conservative estimate of, the pricing power suggested by the market structural conditions (demand elasticity and market shares) implicit in both the GAO and the FCC analyses.

2. Vertical Market Power

Vertical relationships are exploited by cable operators. GAO finds that cable operators are majority owners of one-fifth of the top 90 national networks. The GAO does not find price discrimination but it does find discrimination in carriage. That is, cable operators do not pay themselves more for their own shows, but they are much more likely to air them. The effect is quite large. Cable operators are 64 percent more likely to carry the programming in which they have a majority ownership stake. Cable operators who have a stake in programming also carry fewer channels overall. This result is consistent with prior academic studies.^{xliv}

A one-fifth share of the most popular programs is a very substantial stake in the programming market and it blunts cable operators' incentive to resist price increases. Cable operators own minority stakes in other networks. With their market power at the point-of-sale, cable operators know that they can pass costs through to consumers and they can assure that their own programs are carried much more frequently than those of others, thereby gaining a disproportionate share of the overall increase in programming costs.

While no cable operator had pricing power in the programming market until recently, Comcast appears to have gained pricing power as a large purchaser of programming. Having achieved a large enough market share, it now has monopsony power over sellers of programming. Comcast is squeezing programmers to lower their fees at the same time it is announcing price increases for basic and expanded basic. It is both reallocating rents from programmers to itself^{xlv} and increasing the rents collected from consumers.^{xlvi}

Rights of carriage matter a great deal in the cable industry. The decision of Congress to give broadcasters must carry/retransmission rights has enabled the broadcasters to gain a significant advantage for their programming, in terms of carriage. Programs owned by broadcasters are 41 percent more likely to be carried by cable operators. Clearly, independent programmers are at a severe disadvantage, as has been demonstrated time and again. Although the GAO report concludes that 38% of the cable networks are majority owned by non-cable, non-broadcast firms, a much smaller percentage, less than 20 percent, do not have at least some minority ownership of broadcasters or cable operators.

EXHIBIT 3:
Comparison of Empirical Estimates of Mark-Up
Using Alternative Measures of Concentration and Dummy Variables

SOURCE	CONCENTRATION MEASURES		
	Non-competitive	Competitive	
FCC ($E_d = 2.2$)	<u>HHI = 6800</u> 45.1	<u>HHI = 3912</u> 17.8	ΔL -27.3
DIRECT ESTIMATE			
Head-To-Head Concentration Total			- 9.1 <u>-25.6</u> -34.1
GAO ($E_d = 1.54$)	<u>HHI = 7312</u> 47.4	<u>HHI = 3418</u> 22.2	-27.3
DIRECT ESTIMATE			
Head-To-Head Concentration Total			-15.1 <u>- 5.4 to -8.0</u> -20.5 to 23.5

Sources: Federal Communications Commission, *Report on Cable Prices*, April 4, 2002, Attachment D-1; U.S. General Accounting Office, *Issues Related to Competition and Subscriber Rates in the Cable Television Industry*, October 2003, Appendix IV, Table 3. Viscusi, W. Kip, John M. Vernon and Joseph E. Harrington, Jr., *Economics of Regulation and Antitrust* (Cambridge, MA: MIT Press, 2001), pp. 102-108, 147-149, 258-259. Lerner Index:

$$L = S_i \frac{(P_m - MC)}{P_m} = \frac{HHI}{10000} * \frac{1}{E_d} \text{ (Nash Equilibrium)}$$

While discrimination in carriage has implications for the pricing issue that is the central concern of this paper, it has much broader implications for public policy in the multichannel video market. Public policy has expressed a concern about promoting independent production and ensuring a diversity of content for decades. Two pending proceedings at the FCC directly involve the question of how concentration of ownership and the exercise of market power in the form of discriminatory access to distribution affect the content available to the public. In the horizontal limits proceeding, the FCC is charged with setting a limit on the market reach of a single cable operator.^{xlvi} Similarly, in several of the media ownership proceedings the market reach of broadcasters (and the availability of cable as a distribution technology) is a central concern. The conclusion is overwhelmingly clear. Those who have Congressionally mandated rights of carriage are able to have their shows aired, those who do not have almost no chance of success.

C. HIGH-SPEED INTERNET

Although high-speed Internet raises many important issues, from the point of view of video services pricing, it plays two important roles.

First, it is cited by the industry and analyses as one of the causes for the increase in cable prices. Since the plant upgrade supports other streams of revenue, the GAO cautions, “[f]irst, depreciation expenses (and therefore infrastructure investment) represent a joint (or common) expense for both video-based and Internet-based services. Because these expenses are associated with more than one service, it is unclear how much of this cost should be attributed to video-based services. Second, cable operators are enjoying increased revenues from these non-video sources.”^{xlvi} The same is true for operating expenses. A large part of the increased expense is associated with the selling and servicing of advanced video, Internet and telephone service that “have been spread across the entire revenue base – i.e. they are reflected in the prices paid by basic cable subscribers.”^{xlix}

Looking at a short period, 1999 to 2002, the GAO finds that revenues from Internet services alone are already almost equal to the increased depreciation expense of the cable plant upgrade. The GAO estimates that capital costs (depreciation expenses) have increased by \$80 per subscriber, while Internet-only revenues increased by \$74.¹

Second, cable operators have rapidly achieved positive cash flow from high-speed Internet services because of weak competitive forces. Cable operators are aggressively bundling high-speed Internet with video services to gain competitive leverage. Their market power over high-speed Internet access gives them an important anticompetitive tool. Cable has foreclosed competition for Internet access service over its platform.^{li} Controlling the platform diminishes the potential competition from video streaming over the Internet^{lii} and becomes a lever against competition from other distribution technologies. Cable has an 83 percent market share of the residential advanced high-speed Internet market.^{liii} Moreover, cable provides overwhelmingly (87 percent) advanced service, while DSL is overwhelmingly (67 percent) not advanced.

Discrimination was even more brutal in the Internet space as cable operators applied their business model to high-speed Internet access. Only a consent decree forced Time Warner to allow modest access, and intense scrutiny forced AT&T to make some minor concessions, but

the recent AOL/AT&T carriage agreement is thoroughly anticompetitive.^{liv} AOL has been unable to actually execute any carriage agreements with cable companies.^{lv} Cable operators do not sell ISP services outside of their service territories where they have the leverage of their market power over cable facilities.

With intramodal competition foreclosed, cable faces only weak intermodal competition. Cable has scoffed at the modest discounting efforts of the telecommunications-based DSL service providers.^{lvi} In fact, Comcast raised the price of stand-alone high-speed Internet on its newly acquired AT&T systems. The reason cable can ignore intermodal competition is simple; those discounted services are substantially more expensive on a megabit basis (see Exhibit 4). The cable operators ignore DSL pricing moves and harp on speed superiority in their advertising. Exhibit 4 also shows why dial up is not a substitute for high-speed access. It is far more expensive on a megabit basis. Moreover, dial-up lacks the other key feature of high-speed service -- it is not always on. This distinction led the Justice Department to declare early on that high-speed Internet is a separate product from dial-up.^{lvii}

Satellite lacks the ability to offer a bundle of video and high-speed Internet to compete effectively with cable. Cable recognizes this and is aggressively bundling high-speed Internet with basic cable service -- offering a 25 percent discount on a bundle of basic cable and Internet compared to stand alone Internet service.^{lviii}

Looking carefully at specific product and geographic markets reveals little competitive overlap of different facilities (see Exhibit 5).^{lix} Intermodal competition is weak at best. Technological differences give different facilities an edge in different customer and geographic markets.^{lx} Cable dominates the advanced residential high-speed Internet market, with a 75 percent market share for residential market of speeds of greater than 200kbps in both directions.^{lxi} DSL, as deployed, is ill suited to multimedia video applications,^{lxii} but DSL dominates the non-residential market with a 95 percent market share because businesses are disinclined to use cable.^{lxiii} For the next generation telephone network technologies, "most experts agree that the VDSL business case isn't for everyone and won't^{lxiv} realize its full revenue potential for decades."^{lxv}

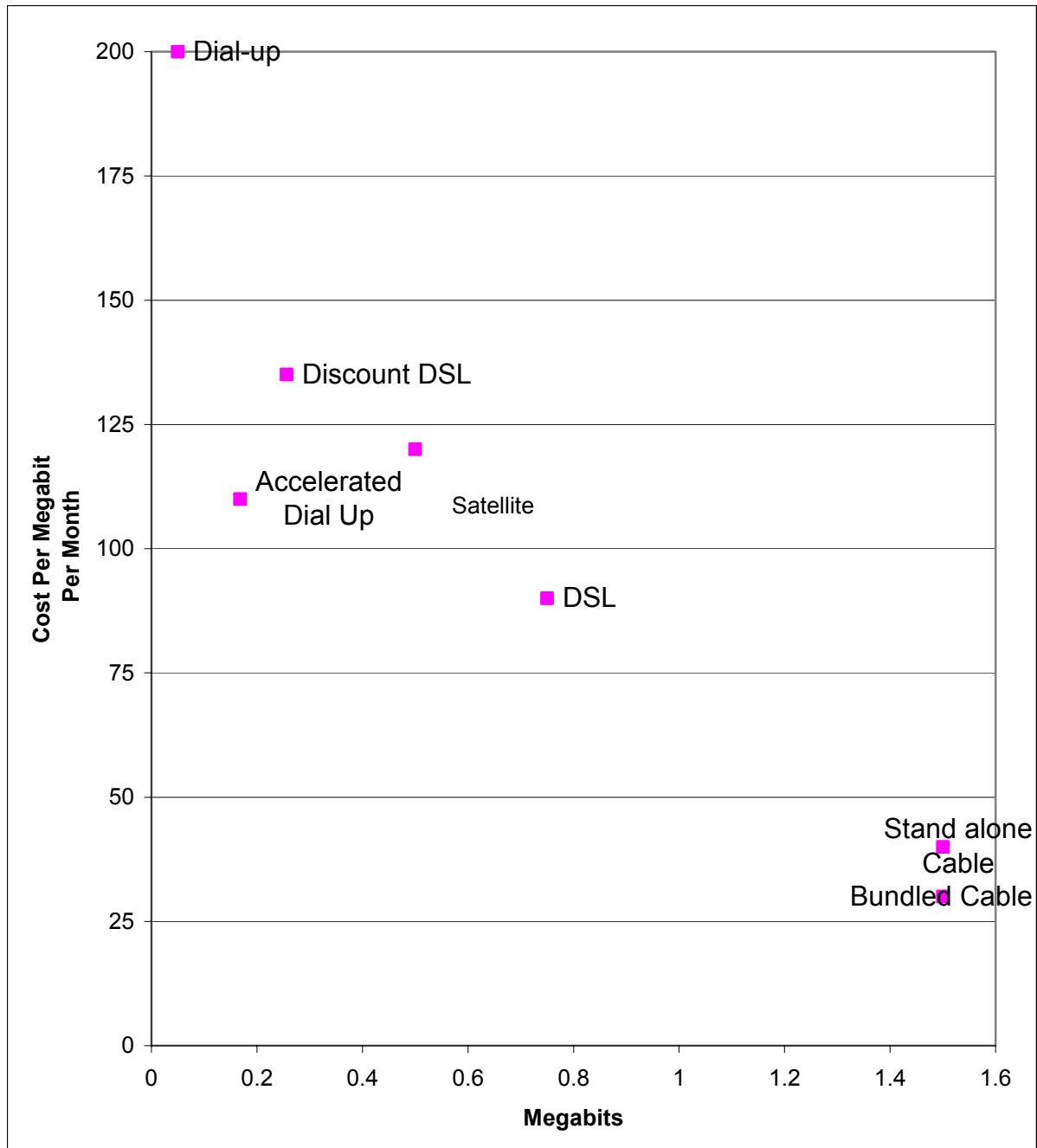
However, cable operators devote less than two percent of the capacity of their systems to cable modem service. They could easily expand that if they so desired. This gives them an immense advantage over telephone companies.^{lxvi}

D. CASH FLOW ANALYSIS

1. All Revenues, All Costs

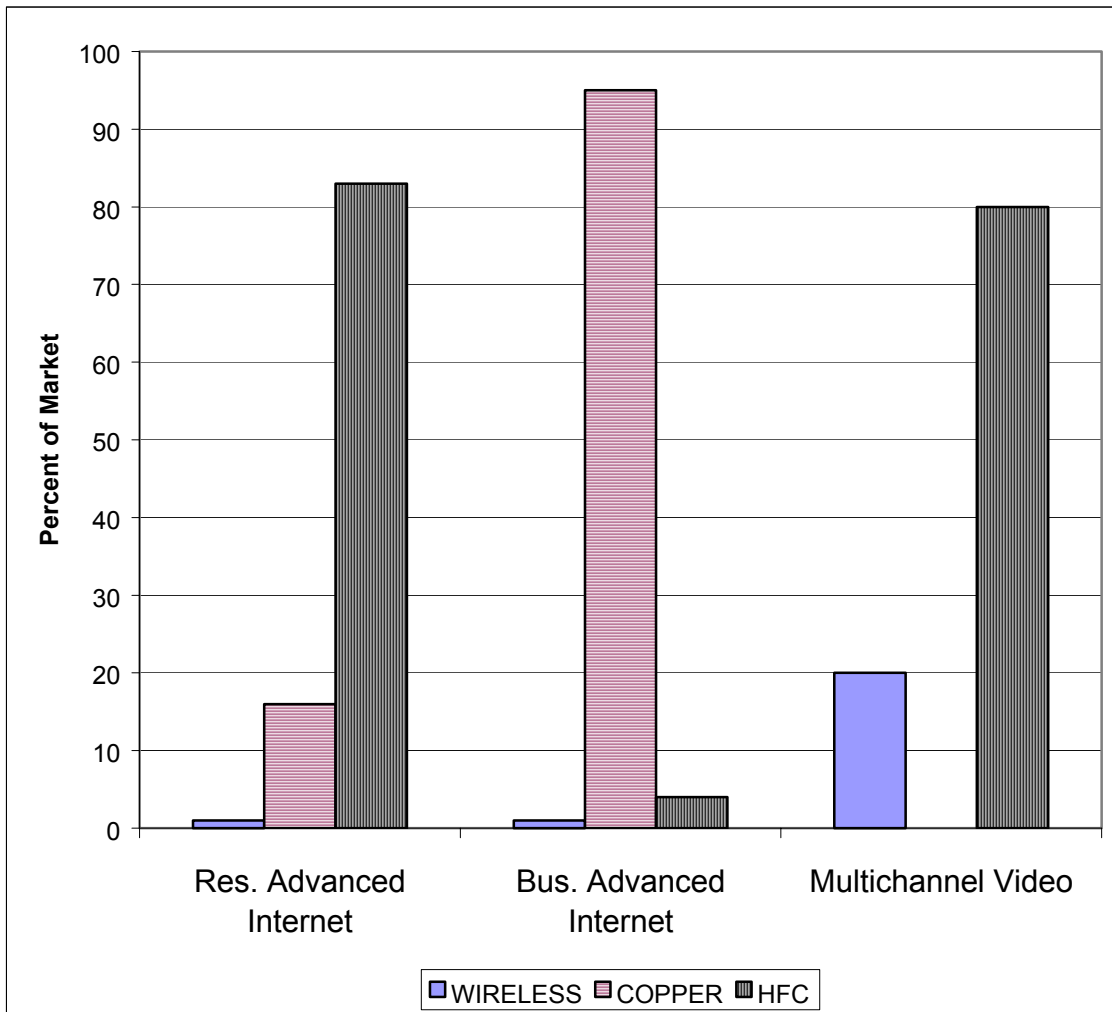
To assess whether the rate increases of recent years have been abusive, I analyze cash flow. I use 1995 as the base year, since the Telecommunications Act of 1996 was signed in early February. For several reasons, it is important to capture this whole period. Industry analyses, including that of the GAO, choose a very short time frame, 1999 to 2002, and miss critical factors.^{lxvii}

EXHIBIT 4:
The Price of High-Speed Internet Service



Source: Calculated by author from web site visits.

**EXHIBIT 5:
Market Segmentation Of Services Between Technologies**



Source: Federal Communications Commission, *In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, Fifth Annual Report, December 23, 1998, Table B-7; Ninth Annual Report, December 2002, Table Appendix B. *High-Speed Services for Internet Access*, December 2003, Table 1, 2 and 4; *Local Telephone Competition: Status as of December 31, 2002*, June 2003, Tables 1, 13; NCTA, Overview 2003: Mid-Year, p. 1.

First, the upgrade of the cable plant began well before 1999, as did the post-1996 Act rate increases. By 1999, the cable industry had already upgraded one-third of its plant. Rates for basic + expanded service had already increased by 50 percent and net operating income (operating revenue minus operating costs) had increased by over 25 percent. In fact, just one year after the passage of the Telecommunications Act of 1996 the issue of cable rate increases had already arisen. The FCC's January 1997 cable price report noted that "the Cable CPI

increased at a 3.7% compound annual rate from January 1995 to December 1995, and at a 8.5% compound annual rate for the eleven months from January 1996 to November 1996.”^{lxviii} The song and dance about the causes of the increases had already begun, when the Commission declared:

we note from anecdotal evidence reported in both the trade press and the general news media that cable operators have attributed the recent increases in cable rates to higher programming costs, system upgrades which provide additional channels, and the pass through of the effects of general inflation on operators’ costs.^{lxix}

Second, the GAO report does not examine all of the revenues and costs consistently, since it never factors in advertising revenue. It appears to underestimate an important source of revenue, digital tier revenue, and an important cost stream, non-programming operating expenses. The GAO did not break out the revenues from advanced video services that are also made possible by the upgrade.

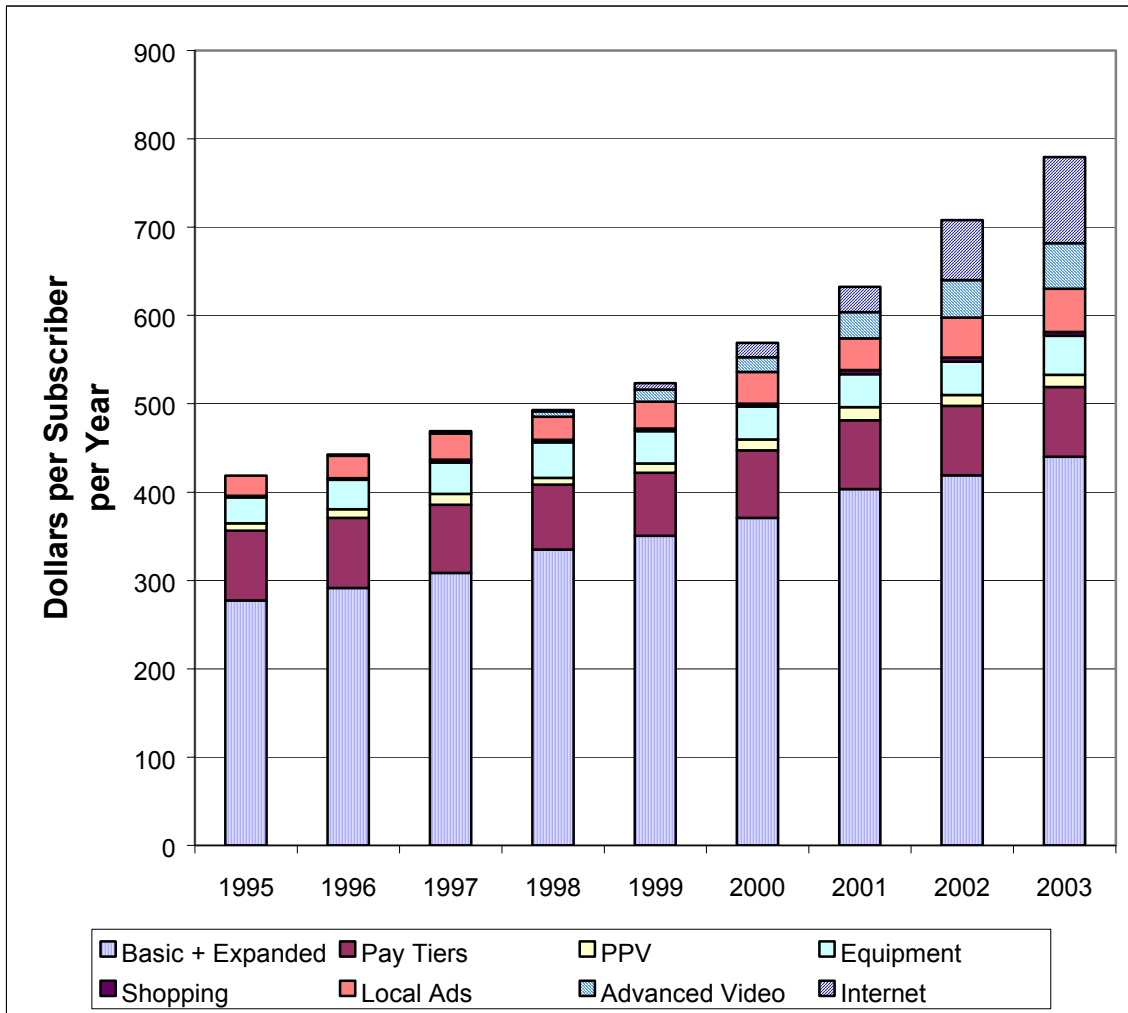
Third, the upgrade of the physical plant was largely (80 percent) complete by year-end 2002 and capital outlays dropped off dramatically in 2003.^{lxx} Since penetration of high speed Internet is in its early stages, and advanced video services have not yet fully penetrated, cable operators are set to reap huge profits as advanced digital video and Internet services penetrate the market. In other words, capital costs are set to decline sharply, while revenues from the services that are supported by those capital costs are increasing sharply.

For the eight-year period (1995-2003), there has been a \$360 increase in revenues per subscriber per year (see Exhibit 6).^{lxxi} Revenues per subscriber per year have almost doubled, while the number of subscribers has increased by 10 percent. There for total revenues in absolute value have more than doubled.^{lxxii} The new services (advanced video and Internet and to a much lesser extent cable telephony) have come to play a large role in total revenue, projected to make up about one-fifth of the total in 2003. Operating cash flow per subscriber (operating revenues minus operating costs) increased by \$140 from 1995 to 2003. This is an increase of 77 percent per subscriber and 90 percent in absolute terms. This is cash flow that is available for capital service and excess profits.

2. Cash Flow for Traditional Video Services

The GAO cautions that it is difficult to apportion capital costs between the traditional video business and the new lines of business. The same is true with operating expenses. An expert for Cox recognizes the problem, but conveniently punts:

**EXHIBIT 6:
Increasing Revenues Per Subscriber**



Source: Federal Communications Commission, *In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, Fifth Annual Report, December 23, 1998, Table B-7; Ninth Annual Report, December 2002, Table 4; Tenth Annual Report, Table 4.

In particular, it seems likely that a relatively large share of increased capital costs and perhaps also operating costs may have been incurred in order to permit firms to offer more advanced products than expanded basic service, such as digital tiers of service (including pay per view and video on demand), broadband internet connections and telephony.

In my opinion, any attempt to allocate a portion of those cost increases to basic analog service (in order to determine if prices for expanded basic service have risen by more than would have been sufficient to cover all cost increases of expanded basic service) would require a long list of assumptions which would be open to question and controversy.^{lxxiii}

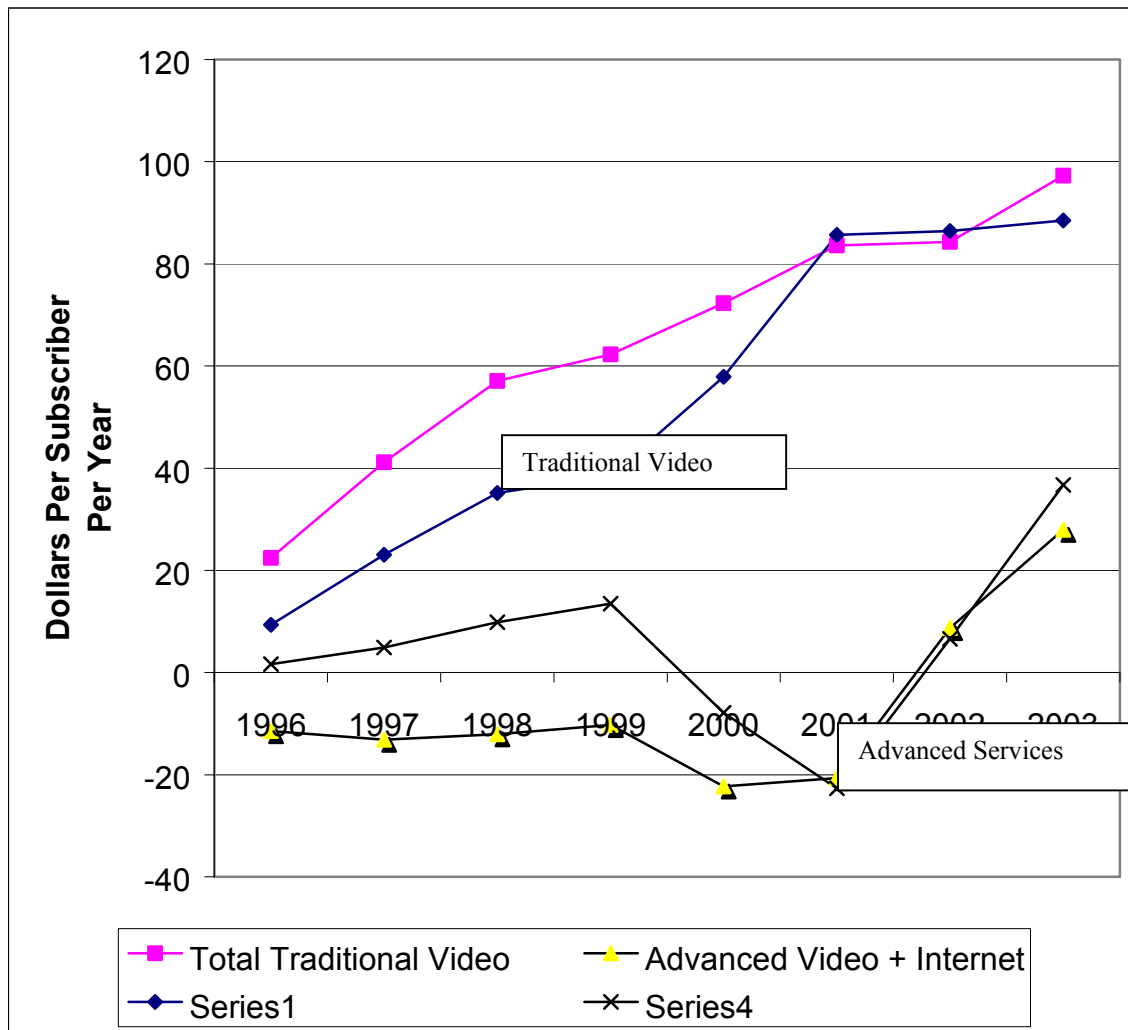
Considering a plausible scenario to assess the run-up in cash flow from traditional video businesses shows why the cable industry chooses not to show how much the cost of basic and expanded basic service have increased.^{lxxiv} Between 1995 and 1998, before advanced video and Internet were being widely sold to the public, operating expenses increased by about 4.5 percent per year.^{lxxv} Between 1998 and 2002, operating costs increased by over 14 percent per year, more than three times the rate prior to the aggressive marketing of advanced and Internet services. There is good reason to believe that the increase in operating expenses was not due to traditional video services.

From 1995 to 1998, cable operators added 3.3 million basic subscribers, just about as many as they added from 1998 to 2002.^{lxxvi} From 1995 to 1998, cable operators added 117 new advertiser supported cable networks, over 50 percent more such networks than they added from 1998 to 2002.^{lxxvii} Thus a substantial expansion of subscribers and traditional video services occurred with modest increases in operating costs.

There is no doubt that after 1998, operating costs to support advanced video and Internet services increased sharply. One can argue that there was some increase in non-programming operating costs attributable to basic and expanded basic, but little of the capacity added to cable systems was devoted to that purpose. Full upgrades add the equivalent of 70 or more 6-megahertz channels, only 10 of which have been dedicated to basic and expanded basic tiers of service. A cautious approach shows the impact.

Exhibit 7 splits the cash flow into two streams. One stream is made up of traditional video (basic+expanded+pay tiers+pay per view+equipment+shopping+local advertising). The other stream is made up of advanced video and Internet. Operating cost increases have been apportioned under the following two sets of assumptions. All of the pre-1999 operating cost increases are attributed to traditional video. In one scenario, forty percent of the post-1999 operating cost increases is attributed to traditional video. This figure is suggested by an analysis prepared for ESPN, which estimates that the increase in programming costs in 1999 to 2002 was equal to 32 percent of the total increase in operating costs.^{lxxviii} In the second scenario, the post-1999 increase is assumed to be 4.5 percent (the pre-1999 rate) plus \$1 additional each year for 2000-2003, which is the average annual increase in programming costs per subscriber in the 1999 to 2002 period. In both cases, the results are similar.

EXHIBIT 7:
Cumulative Increases in Cash Flow Per Subscriber
From Traditional and Advanced Cable Services



Source: Federal Communications Commission, *In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, Fifth Annual Report, December 23, 1998, Table B-7; Ninth Annual Report, December 2002, Table 4; Seventh Annual Report, p. 102. Tenth Annual Report, Table 4. See text for assumptions.

Cash flow grew sharply from traditional video service through 2001 and then leveled out at a very high level. The leveling is due to a combination of increasing programming costs and continually mounting non-programming operating costs attributed to traditional video. Non-programming operating expenses for traditional video are not likely to continue to rise at the assumed rate, certainly not for traditional video services. Therefore, the increase in the cash flow is likely to be permanent. Cash flow from traditional services increased as a percentage of revenue from those services. Cash flow from advanced video and Internet services was slightly positive early. It became negative with the major roll out of Internet services, but became sharply positive in 2003.

The market structure and financial analysis in this section present a strong case that the conceptualization of the supply-side of the market in Exhibit 1 is correct. There is a continuing exercise of market power over traditional video services. Both the absolute size and the rate of profits on traditional video services appear to have increased over the period. In this sense, the consumer complaint about rising cable rates is fully justified.

III. THE DEMAND-SIDE

If consumer surplus is also growing rapidly, however, then that might blunt the public policy concern. NCTA seeks to demonstrate that there was a substantial increase in consumer surplus by claiming that the real price of quality-adjusted service has declined. Thomas Hazlett makes a similar claim, based primarily on the growth of subscribers and channels.^{lxxix} In this section, I demonstrate that this basic claim is incorrect and the whole welfare improvement argument overstated.

A. ESTIMATION OF QUANTITY ADJUSTED PRICE CHANGES

The cable industry estimates involve a series of analytic errors of commission and omission and the general claims of increases in consumer welfare have several fundamental flaws. First, there is a misspecification of the units of analysis. Referring to Exhibit 1, the quantity of cable consumed (measured on the X-axis) is counted by NCTA as the total number of viewing hours. Since the X-axis is the total amount of consumption, the amount paid (measured on the Y-axis) should be the total amount paid for the products consumed. However, for the Y-axis in their welfare calculation, NCTA uses the BLS consumer price index for services. NCTA recognizes, however, **that the BLS index has already been adjusted downward for increases in the quantity of channels available and other factors.** Therefore, the NCTA double counts quantity changes. In the analysis below, I use the actual price paid for the total bundle of programs.^{lxxx}

Second, NCTA chooses to start its analysis eighteen months after the passage of the Telecommunications Act of 1996, conveniently excluding eighteen months of the most rapid rate increases in the history of the industry. Third, there would also appear to be a mismatch between the estimate of increased viewing and the estimate of declining prices. Since viewing numbers are seasonal and January is roughly the mid-point of the season, I use January prices.^{lxxxi}

The cable industry estimates that in the 1995/1996 season, the average cable household watched 23.4 hours of advertiser supported cable networks per week (see Exhibit 8). I estimate

**EXHIBIT 8:
Cost of Viewing, 1996 & 2003**

Market Condition	Viewing Hours	Monthly Cost/ Cost	Cost/ Hour	Viewing Hour Nominal	Viewing Hour Real
1/1/96 Noncompetitive	23.4	\$22.60	\$.966		\$.966
1/1/03 Noncompetitive switching has full value	34.7	41.60	1.198		1.019
					% Increase in Viewing Cost Nominal
1/1/96 Noncompetitive	23.4	\$22.60	\$.966		
1/1/03 Noncompetitive switching valued ½ at the margin	29.05	41.60	1.432		} 48.2
1/1/96 Noncompetitive	23.4	\$22.60	\$.966		
1/1/03 Noncompetitive switching valued ¼ at the margin	26.0	41.60	1.60		} 1.66
BLS INCREASE (1/1/96 to 1/1/03)					48.5

Source: For hours of viewing, Cable TV Advertising, Weekly Viewing of Ad-Supported Cable per Cable Household, and Source: NCTA, Steven S., *Assessing Quality Adjusted Changes in the Real Price of Basic Cable Service*, attached to Comments of the National Cable Telecommunications Association, in Federal Communications Commission, *In Re: The Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, MB Docket No. 03-172, September 11, 2003, p. 12. Cable prices for noncompetitive systems from Federal Communications Commission, *Report on Cable Prices*, January 2, 1997, p. 12, May 7, 1999, p. 9; June 15, 2000, p. 9; Feb 14, 2001; 9; April 4, 2002, p. 8; July 8, 2003, p. 10; General Price increases from Bureau of Labor Statistics, Consumer Price Index.

that in January 1996, which coincidentally is the month before the 1996 Telecommunications Act was signed, the average monthly bill was \$22.60. The average cost per weekly viewing hour to the consumer was \$.966. The cable industry estimates that in the 2002/2003 season, the average cable household watched 34.7 hours of advertiser supported cable networks per week. I estimate the average price in January 2003 to be \$41.60 per month. The average cost per weekly viewing hour was \$1.199. That is a nominal increase of 24 percent. Inflation over the period was 17.7 percent, so the real increase was 5.5 percent. This is a very different picture than the 15 percent decline that NCTA claims by double counting quality improvements.

B. BUNDLING, THE DEMAND CURVE AND CONSUMER SURPLUS

These simple math problems are compounded by conceptual issues. Bundling is the central character in the current drama surrounding cable prices and this wreaks havoc with the NCTA estimate of consumer welfare. The failure of cable operators to offer cable channels on an unbundled basis makes it difficult to divine the demand curve for individual channels. NCTA mentions, in passing, that viewing is not evenly distributed, but that does not influence its calculation. NCTA assumes (or at least uses in every example and hypothetical case) that demand is linear and that elasticity does not change over time. Both of these assumptions are dubious at best. Cox assumes demand is linear, equal and uncorrelated across individual channels to work its example of consumer benefit from bundling.^{lxxxii} This, too, is dubious, at best.

At least Cox recognizes that there are conditions under which bundling results in consumer harm. The conditions are:

related to a firm's motivation to try to charge different consumers different prices for the same product depending upon what they are willing to pay for it. The essential idea is that when there is some negative correlation between individual consumers' valuation of different products, that firm can sometimes charge higher prices to everyone by bundling goods together.^{lxxxiii}

Although Cox notes that: "it is easy to create examples where bundling can make consumers worse off but equally easy to create examples where bundling makes consumers better off," it ignores the problem.^{lxxxiv} Bundling demands greater attention.

Comcast's approach provides a useful starting point. It presents cable bundling as a greengrocer who sells tomatoes for \$2 per pound, but who might also sell five pounds for \$7.50. The tomatoes are cheaper on a per unit basis in the bundle (a volume discount) although the total bill is greater. The fundamental problem is that greengrocers invariably give the consumer a wide range of choices. The consumer can buy half a pound of tomatoes, or three pounds, or take the five-pound discount, as his or her needs may dictate. Cable operators do not give consumers that much choice.

In fact, cable operators give consumers almost no choice. Essentially cable consumers have three choices – take nothing, take almost nothing (basic), or take almost everything (expanded basic). If I really need two pounds of tomatoes for my spaghetti sauce, I have to take all five pounds and most of the other fruits and vegetables, even though the rest of it is of little

value to me.^{lxxxv} My next door neighbor, who really needs two pounds of apples for her pie, is forced to buy five pounds of apples and the tomatoes and all the other fruits and vegetables, too. We both end up paying a higher price and, given the nature of the commodity, we cannot recapture the surplus through trade. It is conceivable that we could split the cost, but then I have to have my neighbors in my house all the time. If we buy one subscription and try to run a wire (or a wireless network) between our houses, the cable operators have us arrested for stealing their signal.

NCTA's welfare analysis assumes a full hour of increased welfare when a consumer shifts from watching a broadcast show to watching a cable show. That is, if a consumer watches a rerun of "Law and Order" on USA, instead of NBC, NCTA claims the full hour as an increase in the consumer's welfare. There may be little welfare gain. If the consumer had shifted from watching "West Wing" to watching "Law and Order," one could argue that there is a welfare gain, but it is only the marginal difference between the two. Because the shows are all forced into the bundle, we cannot tell what consumers would pay for them on a stand-alone basis.

If total hours of viewing had increased as much as cable viewing, the assumption that every hour watched on cable represents a full hour of gained consumer welfare would be more plausible, but that is not the case. The increase in total viewing is considerably less than the increase in cable viewing. In contrast to the 5.7 percent per year increase claimed by cable operators for viewing of advertiser supported cable networks, the FCC cites estimates of less than a 1.5 percent per year increase in viewing over a similar period,^{lxxxvi} while others show less than a one percent per year increase. A well respected industry source that estimates both total TV viewing hours and basic/expanded cable network viewing hours puts the total increase at 25 percent of the cable switching increase.^{lxxxvii} Even if we assume that the entirety of increased TV viewing occurred in cable households, we would still conclude that the net increase in viewing was equal to slightly over one-third of the total increase in cable network viewing.

If we assume that the actual increase in consumer welfare is equal to half the total increase in cable viewing (leaving some room for a marginal increase due to switching), the quality-adjusted cost would be \$1.432 (see Exhibit 8). The increase in the price over the 1996 – 2003 period would be 48 percent. Interestingly, the quantity and quality adjusted price as reported by the BLS increased by 49 percent over this period. If the increase in value in viewing were equal only to the increase in total viewing (i.e. valued $\frac{1}{4}$ at the margin), the effective price increase would be 66 percent over this period, almost fifty percent higher.

The case against the BLS price index is not convincing. In fact, the BLS may be over-adjusting for quantity and quality because many channels are forced into the bundle that few people are watching. The top 10 cable programs account for 50 percent of all viewing that is significant enough to be registered by Nielsen. The top 20 shows account for 75 percent of all such viewing. The GAO reports that the typical household watches only 17 channels. People are being forced to buy a lot of shows they don't watch to get the ones they want. Although the bottom 30 shows that register on the Nielsen scale pass an average of just under 70 million homes, only about a quarter of a million households watch them during any given day. For every one household watching, approximately 250 who are forced to pay for it in the bundle are not. For the bottom two shows, the ratio is 1 to 800. Over 250 additional cable networks do not capture enough viewers to even register on the Nielsen scale.^{lxxxviii}

A recent study by Deutsche Bank of the Cox – ESPN controversy reinforces the conclusion that bundling leads NCTA to overestimate the welfare gains (see Exhibit 9).^{lxxxix} ESPN is one of the most popular and the most expensive cable networks, yet seventy-eight percent of respondents said that they would not pay \$2 per month for it if they were given the choice. Cox confirms this estimate, noting that less than a quarter of its subscribers are “avid sports fans.”

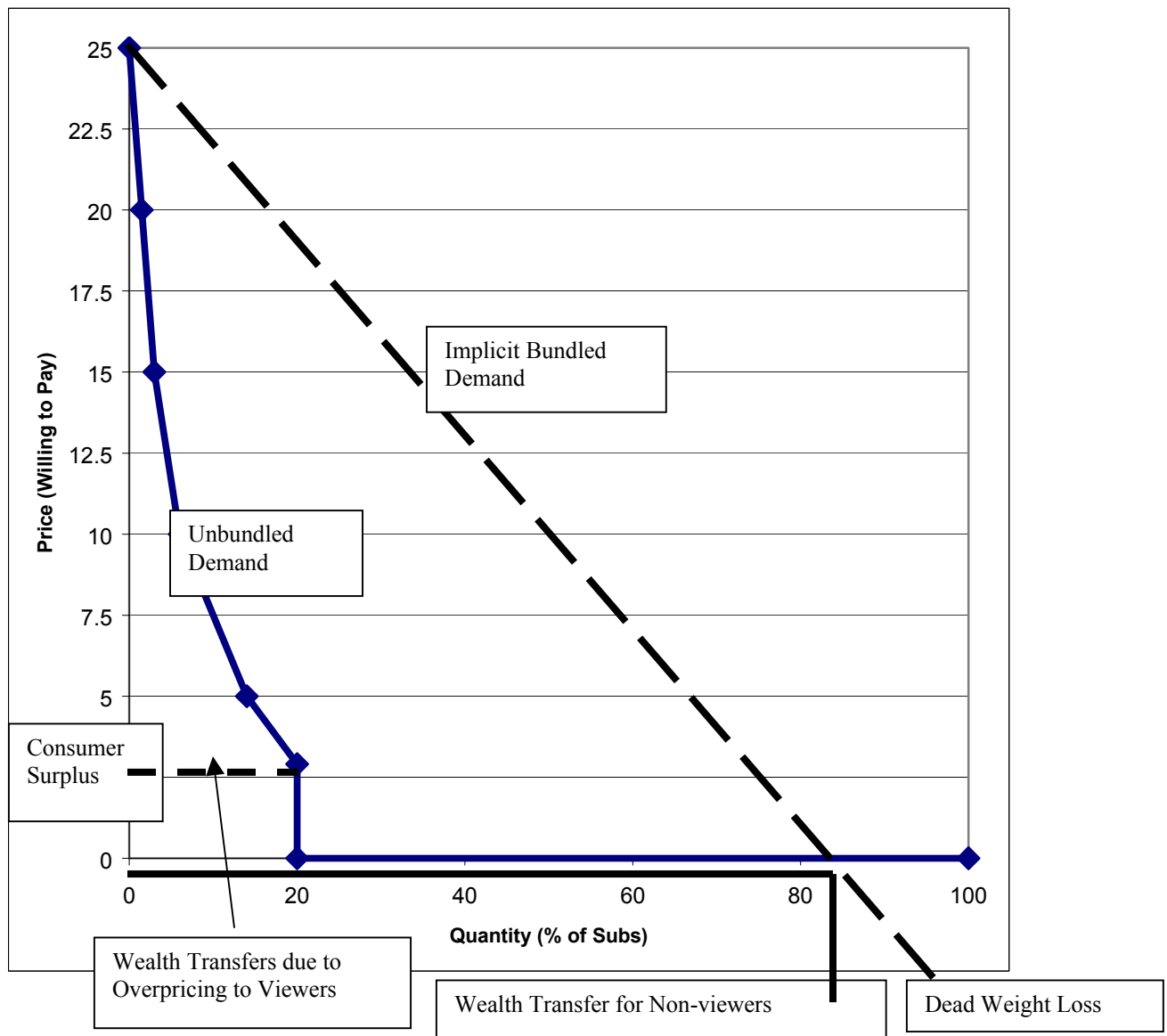
There is good reason to believe that the elasticity of demand for ESPN alone is a lot higher than for the bundle and that the bundling of sports programming into the most popular package is harming consumers. The three-quarters of cable viewers who say they would not pay \$2 dollars for ESPN, likely the three-quarters who are less than avid sports fans, are paying over \$1.5 billion for it in the bundle (at Cox’s cost).^{xc} Exhibit 9 shows the wealth transfers and efficiency losses associated with ESPN. For every one dollar of consumer surplus, there is at least one dollar of wealth transfer. This does not include the wealth transfers associated with the overpricing of ESPN to those who would take it, which may equal another quarter of the consumer surplus. The deadweight efficiency losses are an additional cost associated with this anti-consumer bundling.

IV. LONG-TERM TRENDS

A. PRICE

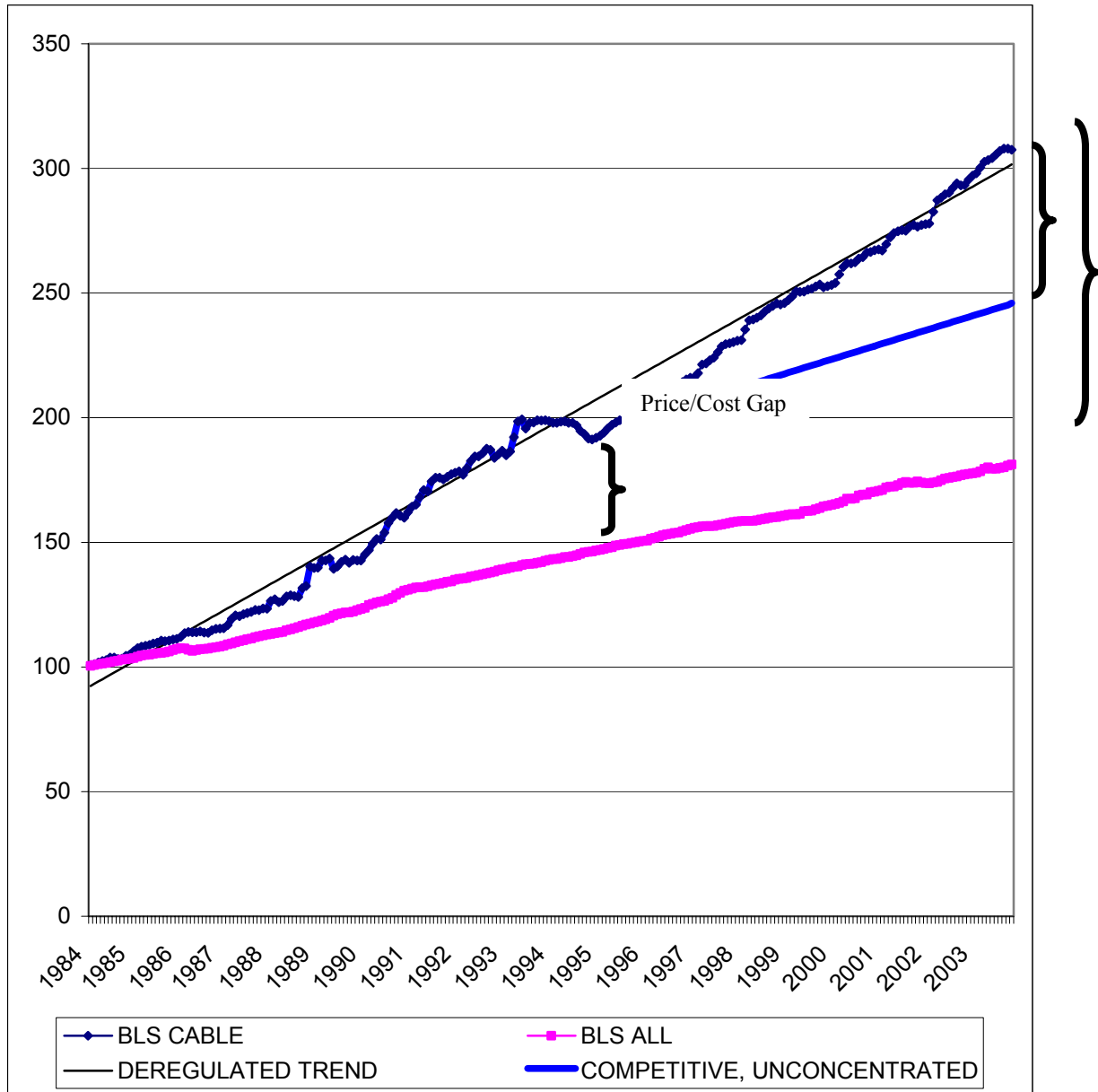
NCTA’s hours of viewing approach to consumer welfare analysis vastly overstates the gain in welfare and the BLS number of channels approach may well be overstating the quality adjustment. Given this conclusion, it is instructive to note the long-term trends of cable pricing. I have pointed out that the FCC was already being challenged to explain dramatic rate increases in the January 1997 report on cable pricing. In that report, the Commission reproduced a graph it had used to show that rate regulation in the 1993-1995 period had shielded consumers from price increases (see Exhibit 10). The trend line and the price line, extended through September 2003, show that the Commission had squeezed out a small part of the excess profits during the short period of rate regulation, but the 1996 Act launched the industry on a trajectory that not only recaptured what had been lost during the short period of partial regulation, but has gone beyond what it had been extracting in the past. This reaffirms the depiction in Exhibit 1.

**EXHIBIT 9:
Wealth Transfer and Consumer Surplus For ESPN**



Source: Deutsche Bank, *Walt Disney Company*, October 27, 2003, p. 16.

EXHIBIT 10: **Long Term Price Trends**



Source: Bureau of Labor Statistics, CPI. Deregulated trend is a linear projections of January 1983- April 1993, Competitive, unconcentrated from Exhibit 15.

B. QUANTITY

The aggressive bundling of cable programming, across video tiers and now between video and non-video services, complicates the consumer welfare analysis enormously. The claim that regulation hurt consumers is simply wrong. The number of subscribers has grown virtually every year since the inception of the industry (see Exhibit 11).

A model that uses the long-term trend in income growth and price changes to predict cable subscribers explains 96 percent of the variance in cable growth. It suggests that cable subscription performed somewhat better than expected in the early-mid 1990, when rates were regulated momentarily, but somewhat worse than expected since rates were fully deregulated. Adding in competitive satellite (i.e. the number of satellite subscribers who live in areas where cable is available)^{xcii} fills the gap somewhat, but at the end of the period, there are fewer households subscribing than projected. This is the deadweight inefficiency we would expect to see as a result of the aggressive price increases and bundling of recent years. It is exactly the opposite of what the cable industry experts claim.

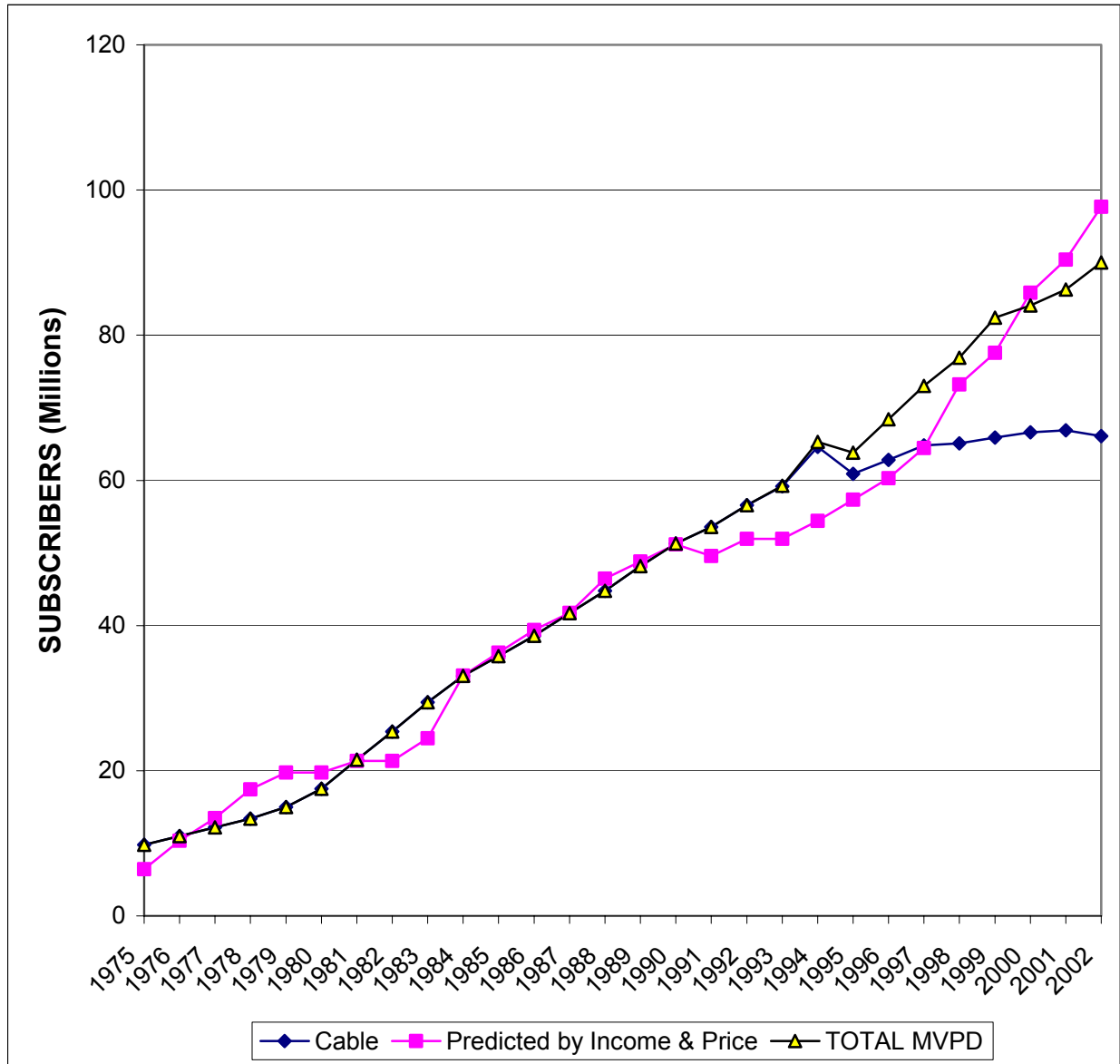
V. CONCLUSION

The basic comparison that consumer advocates have made to reflect the pain inflicted by cable operators – that cable prices have been rising at almost three times the rate of inflation – is a solid and proper way to state the problem. The complaint that prices are rising too fast is valid – reflected in the increasing cash flow thrown off from traditional video services. There is no doubt that consumers are being harmed by a lack of effective competition for cable. That cable operators have ridden the wave of rising incomes and changing technologies does not demonstrate the positive quality of their pricing/bundling strategy. The claim that deregulation helps consumers because consumer welfare has increased begs the question of whether abuse of consumers has increased even more rapidly.

The possibility of anti-consumer bundling has long been recognized in the economics literature. The data suggests that cable operators have pushed prices into the range where there is price resistance (i.e., the more elastic portion of the demand curve). That does not mean the abuse has stopped, it simply means it may not grow as quickly as in the past, but cable operators are aggressively finding ways to keep their producer surplus growing, like rebundling (retiering) programming to drive penetration of digital tiers.^{xciii} The recognition of the possibility of anticompetitive bundling in a dynamic or strategic sense is more recent, but no less important, especially as cable market power is “swung” into the high-speed Internet.^{xciii}

Bundling is one of the strategies that monopolists use to extract consumer surplus and the evidence is consistent with such an interpretation in this case. Public policy might attack bundling, but policy that controlled the rents directly would be preferable. Of course, real competition would be better still, but after two decades of failure of competition to develop and with the cable operators extending the anticompetitive, anti-consumer business model to the Internet, the need for action is critical.

EXHIBIT 11:
Income Growth as a Predictor of Cable Subscription



Sources: Federal Communications Commission, *In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, Tenth Annual Report, January 5, 2004, Table 1; Ninth Annual Report, December 2002, Table B-1; Sixth Annual Report, Table C-1; for 1995 through 2002; Paul Kagan Associates, *History of Cable TV Subscribers and Revenues*, 1997, for pre-1995; Income is real, per capita disposable income from *Economic Report of the President* (February 2003), p. 313.

ENDNOTES

ⁱ Federal Communications Commission, In Re: The Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, MB Docket No. 03-172.

ⁱⁱ U.S. General Accounting Office (U.S. GAO), Issues Related to Competition and Subscriber Rates in the Cable Television Industry, October 2003; Telecommunications: Issues in Providing Cable and Satellite Television Service, October 15, 2003.

ⁱⁱⁱ Fabrikant, Geraldine and Bill Carter, “Cable’s New Giant Flexes His Muscles,” *New York Times*, October 20, 2003; “Testimony of James O. Robbins,” *Senate Commerce Committee*, May 6, 2003.

^{iv} Eisenach, Jeffrey A. and Douglas A. Truehart, *Rising Cable Rates: Are Programming Costs the Villain?*, supported by ESPN, Inc., October 23, 2003 (hereafter ESPN); Economists Inc., *Consumer, Operator, and Programmer Benefits from Bundling Cable Networks*, July 2002; Rogerson, William P., *Cable Program Tiering: A Decision Best and Properly Made by Cable System Operators, Not Government Regulators*, November 10, 2003, funded by Cox (hereafter Cox); *Correcting the Errors in the ESPN/CAP Analysis Study on Programming Cost Increases*, November 11, 2003, prepared for Cox Communications (Cox II).

^v Katz, Michael, *An Economic Analysis of the Claims made by Dr. Mark Cooper in “Cable Mergers, Monopoly Power and Price Increases,”* Commissioned by Comcast Corporation, July 28, 2003 (hereafter Comcast). The target of the Comcast paper is a short study prepared in January 2003 entitled *Cable Mergers, Monopoly Power and Price Increases* (Washington, DC: Consumer Federation of America and Consumers Union, January 2003). This critique ignores several much longer documents including Consumer Federation of America, “Comments of the Consumer Federation of America, Consumers Union, Center for Digital Democracy, The Office of Communications of the United Church of Christ, Inc., National Association of Telecommunications Officers and Advisors, Association for Independent Video Filmmakers, National Alliance for Media Arts and Culture, and the Alliance for Community Media,” 2002; and “Reply Comments of the Consumer Federation of America, Consumers Union, Center for Digital Democracy, and Media Access Project,” 2003; Federal Communications Commission, *In the Matter of Implementation of Section 11 of the Cable Television Consumer Protection and Competition Act of 1992, Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996, The Commission’s Cable Horizontal and Vertical Ownership Limits and Attribution Rules, Review of the Commission’s Regulations Governing Attribution of Broadcast and Cable/MDS Interests, Review of the Commission’s Regulations and Policies Affecting Investment in the Broadcast Industry, Reexamination of the Commission’s Cross-Interest Policy*, CS Docket No. 98-82, CS Docket No. 96-85, MM Docket No. 92-264, MM Docket No. 94-150, MM Docket No. 92-51, MM Docket No. 87-154; and Cooper, Mark, *Cable Mergers and Monopolies: Market Power in Digital Communications Networks* (Economic Policy Institute, 2002).

^{vi} Wildman, Steven S., *Assessing Quality Adjusted Changes in the Real Price of Basic Cable Service*, attached to Comments of the National Cable Telecommunications Association, in Federal Communications Commission, In Re: The Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, MB Docket No. 03-172, September 11, 2003 (hereafter NCTA).

^{vii} Federal Communications Commission, *Tenth Annual Report (In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming)* Washington, DC, January 28, 2004 (hereafter Tenth Annual Report).

^{viii} “Testimony of Gene Kimmelman,” *Senate Commerce Committee*, May 6, 2003, cited in ESPN, p. 4.

^{ix} *Tenth Annual Report*, para. 10.

^x *Tenth Annual Report*, para 139.

^{xi} *Tenth Annual Report*, para 30.

^{xii} *Tenth Annual Report*, para 31.

^{xiii} *Tenth Annual Report*, note 73.

^{xiv} *Tenth Annual Report*, note 203.

^{xv} *Tenth Annual Report*, Table 4.

^{xvi} *Tenth Annual Report*, footnote 11.

^{xvii} *Tenth Annual Report*, para. 140.

^{xviii} Cooper, Mark, *Media Ownership Democracy in the Digital Information Age* (Stanford: Center for Internet and Society, 2003), Chapter 6.

^{xix} *Tenth Annual Report*, para. 136.

^{xx} *Tenth Annual Report*, para 130-132.

^{xxi} See *Tenth Annual Report*, Table B-1.

^{xxii} Compare *Tenth Annual Report*, para 41 and 65.

^{xxiii} *Joint Statement of Commissioners Michael J. Copps and Jonathan S. Adelstein, Concurring*” January 28, 2004.

^{xxiv} The only evidence that the industry paper gives on market power is provided by Comcast, which points to one indicator of market power, Tobin’s q (the system sales price in comparison to the reproduction cost). Citing numbers from the Federal Communications Commission, *Ninth Annual Report, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, MB Docket No. 92-145, December 31, 2002, p. 16), Comcast points out that (p. 19): the “National Average Dollar Value Per Subscriber declined dramatically, falling from a peak of \$5755 in 2000 to \$2196 in January through June 2002.” This statement fails to take into account the dramatic difference in the nature of the systems being transacted. The average number of subscribers transacted in the peak year Comcast cited was over 250,000 per system in 45 transactions for a total of over \$66 billion. The average number of subscribers in the first half of 2002 was only 32,000 in 12 transactions for a total of less than \$1 billion. If we compare small systems transacted in 2000 to the small systems transacted in 2002, we get a very different picture; see Federal Communications Commission, *Seventh Annual Report, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, CS Docket No. 00-132, January 8, 2001, Table C-5. For example, there were 39 transactions in 2000 for systems with fewer than 100,000 subscribers. The average system price was approximately \$2,666 per subscriber. Thus, the system price has declined by about 18 percent, which is modest compared to the stock market declines (see Couper, Elise A, John P. Hejkal, and Alexander L. Wolman, “Boom and Bust In Telecommunications,” *Economic Quarterly*, Fall 2003. The analysis also does not account for a decline in the reproduction costs, was also evident.

^{xxv} Comcast, p. 14, states the proposition as follows: “As long as the increase in the monthly fee is less than the amount by which consumers value the new programming, they will be better off at the new ‘higher’ price coupled with the additional programs.”

^{xxvi} Scherer, F. M. and David Ross, *Industrial Market Structure and Economic Performance* (Boston: Houghton Mifflin, 1990), pp. 21 – 29.

^{xxvii} Comcast, pp. 12-13; Cox, Appendix, uses this model as well.

^{xxviii} Industry defenders frequently claim that rising prices cannot be caused by market power, since in frictionless theory the monopolist would immediately ascertain his profit-maximizing price and charge it (Comcast p. 14, Hazlett, Thomas, *Cable TV: Has Deregulation Failed?*, Manhattan Institute for Policy Research, November 21, 2003). Reality, of course is more complicated than that. Monopolists price politically, searching for what they can get away with before they evoke a reaction, especially in an industry whose rapacious behavior caused it to be reregulated once.

^{xxix} Cox, Appendix, argues that allowing the monopolist to reallocate rents from programmers will increase its rate of profit as well as consumer welfare under some circumstances.

^{xxx} U.S. GAO, 2003, Appendix IV.

^{xxxi} U.S. GAO, 2002.

^{xxxii} *Tenth Annual Report*, para. 83, citing *First Annual Report*, para. 57.

^{xxxiii} Federal Communications Commission, *Report on Cable Prices*, April 4, 2002, Attachment D-1; February 14, 2001, Attachment D-1; June 2000, Attachment D-1; May 7, 1999, C-1.

^{xxxiv} Tenth annual Report, para. 16.

^{xxxv} I assume that 98 percent of cable subscribers lack head-to-head competition (Federal Communications Commission, *In the Matter of the Annual Assessment of the Status of Competition in the Market for Delivery of Video Programming: Ninth Annual Report*, MB Docket No. 02-145, December 31, 2002, para. 115) and 90 percent of those take expanded basic service (ESPN, p. 2). Therefore, 62 million cable households are the victims of abuse of market power. Their bills could be reduced by \$8 per month as a result of genuine head-to-head competition and deconcentration of the industry.

^{xxxvi} U.S. GAO, 2003, Appendix IV.

^{xxxvii} FCC, *Report on Cable Prices*, April 4, 2002, Attachment D-1; February 14, 2001, Attachment D-1; June 2000, Attachment D-1; May 7, 1999, C-1.

^{xxxviii} FCC, *Report on Cable Prices*, February 14, 2001, Attachment D-1; June 2000, Attachment D-1.

^{xxxix} Tenth Annual Report, para 132. Comcast once again has failed to notice the consistent empirical evidence that finds size and clustering increase prices, contradicting their claim that (pp. 18-19) “there is no reason to think that consolidation of cable ownership at the national level will affect actual competition among cable system operators. Ironically, cable industry experts find that mergers of some monopolists matter (John B. Hayes, Jith Jayaratne, and Michael L. Katz, *An Empirical Analysis of the Footprint Effects of Mergers Between Large ILECS*, April 1, 1999, p. 1; citing “Declaration of Michael L. Katz and Steven C. Salop,” submitted as an attachment to *Petition to Deny of Spring Communications Company L.P.*, in *Ameritech Corp. and SBC Communications, Inc., for Consent to Transfer of Control*, CC Dkt. No. 98-141 (filed Oct. 15, 1998) and *Petition to Deny of Spring Communications Company L.P.*, in *GTE Corporation and Bell Atlantic Corporation for Consent to Transfer of Control*, CC Docket. No. 98-184 (filed Nov. 23, 1998)) and that size and alternative distribution opportunities affect bargaining (see Rogerson, William P. “A Further Economic Analysis of the News Corp. Takeover of DirecTV,” *In the Matter of General Motors Corporation, Hughes Electronics Corporation, and the News Corporation Limited Application to Transfer Control of FCC Authorizations and Licenses Held by Hughes Electronics Corporation to the News Corporation Limited*, MB Docket NO. 03-124, August 4, 2003).

^{xl} Cooper, 2002, Chapter 7.

^{xli} U.S. GAO, 2003, Appendix IV.

^{xlii} FCC, *Report on Cable Prices*, April 4, 2002, Attachment D-1.

^{xliii} Cooper, 2002, pp. 21-32.

^{xliv} See Cooper, 2002, pp. 44-47.

^{xl}v Fabricant and Carter.

^{xlvi} Cox, Appendix A shows cable profits rising as programming costs fall.

^{xl}vii , “Comments of the Consumer Federation of America, et. al , *In the Matter of Implementation of Section 11 of the Cable Television Consumer Protection and Competition Act of 1992, Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996, The Commission’s Cable Horizontal and Vertical Ownership Limits and Attribution Rules, Review of the Commission’s Regulations Governing Attribution of Broadcast and Cable/MDS Interests, Review of the Commission’s Regulations and Policies Affecting Investment in the Broadcast Industry, Reexamination of the Commission’s Cross-Interest Policy*, CS Docket No. 98-82, CS Docket No. 96-85, MM Docket No. 92-264, MM Docket No. 94-150, MM Docket No. 92-51, MM Docket No. 87-154

^{xl}viii U.S. GAO, 2003, p. 27.

^{xl}ix ESPN, p. 9.

¹ Cox critics ESPN for comparing current revenues to total capital, a criticism that applies to Comcast even more forcefully, since ESPN at least reports annualized increases in debt costs, whereas Comcast provides no similar calculation. ESPN/s reporting of debt service misses the point, however, since part of the debt was incurred to fund acquisitions, not capital expenditures.

^{li} Only a consent decree forced Time Warner to allow modest access, and intense scrutiny forced AT&T to make some minor concessions, but the recent AOL/AT&T carriage agreement is thoroughly anticompetitive. “A New Model for AOL May Influence Cable’s Future,” *New York Times*, August 26, 2002, p. C1; Gilmore, Dan, “AOL Capitulates, Gives Up Struggle for ‘Open Access’,” *San Jose Mercury News*, September 1, 2002.

^{lii} Cooper, Mark, “Open Access to the Broadband Internet: Technical and Economic Discrimination in Closed, Proprietary Networks,” 71 *University of Colorado Law Review*, 71: 2000;

^{liii} Federal Communications Commission, *High-Speed Service for Internet Access: Status as of June 30, 2003*, December 2003, Table 4.

^{liv} “A New Model for AOL May Influence Cable’s Future,” *New York Times*, August 26, 2002, p. C.1; Gilmore, Dan, “AOL Capitulates, Gives Up Struggle for ‘Open Access’,” *San Jose Mercury News*, September 1, 2002.

^{lv} Hu, Jim, “AOL’s Unrequited Cable Love,” *CNET News.com*, January 26, 2004.

^{lvi} Latour, Almar and Peter Grant, “Verizon May Set Off Price War,” *Wall Street Journal*, May 5, 2003.

^{lvii} *U.S. Department of Justice v. AT&T Corp and MediaOne Group, Inc.*, May 26, 2000.

^{lviii} Conquering the high-speed Internet access as a neighbor market of video has additional advantages in preserving market power in the primary market (see for example, Carlton, Dennis W. and Michael Waldman, “The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industry,” *Rand Journal of Economics*, Summer, 2002; Rubinfeld, Daniel L. and Hal J. Singer, *Open Access to Broadband Networks: A Case Study of the AOL/Time Warner Merger*, 16 Berkeley Tech. L.J. 631, 2001; Ordoover, Lansuz A. and Robert D. Willig, “Access and Bundling in High Technology Markets,” in Jeffrey A. Eisenach and Thomas M. Lenard (eds.), *Competition, Innovation And The Microsoft Monopoly: Antitrust And The Digital Marketplace* (Washington, D.C.: Progress and Freedom Foundation, 1999); Salop, Steven C., “Using Leverage to Preserve Monopoly,” in Jeffrey A. Eisenach and Thomas M. Lenard (eds.), *Competition, Innovation And The Microsoft Monopoly: Antitrust And The Digital Marketplace* (Washington, D.C.: Progress and Freedom Foundation, 1999). Bundling basic video with Internet access has the effect of undermining competition for video services (by driving basic into households and reducing the value of satellite). Bundling video content with Internet access reduces competition for video services, (See, e.g., Comments of the Competitive Broadband Coalition, *Implementation of the Cable Television Consumer Protection and Competition Act of 1992*, Cable Services Bureau Dkt. No. 01-290, at 10-11 [Dec. 3, 2001]). Bundling also raises barriers to entry by forcing competitors to build larger packages to compete: “AT&T is refusing to sell HITS to any company using DSL technology to deliver video services over existing phone lines because such companies would directly compete with AT&T’s entry into the local telephone market using both its own cable systems and the cable plant of unaffiliated cable operators. AT&T simply does not want any terrestrial based competition by other broadband networks capable of providing bundled video, voice and data services.” (Comments of the American Cable Association In the Matter of: Implementation of the Cable Television Consumer Protection and Competition Act of 1992, Development of Competition in Video Programming Distribution: Section 628(c)(5) of the Communications Act: Sunset of Exclusive Contract Prohibition, CS Docket No. 01-290 [filed Dec. 3, 2001]).

^{lix} “Initial Comments of the California ISP Association, Inc.,” *Further Notice of Proposed Rulemaking in the Matter of the Computer III Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review – Review of Computer II and ONA Safeguards and Requirements*, Federal Communications Commission, CC Docket No. 95-20, 98-10, DA 01-620, April 16, 2001 (hereafter CISP, 2001a), p. 7; “Comments of DirecTV Broadband, Inc.,” *In the Matter of Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities, Universal Service Obligations of Broadband Providers, Computer III Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review – Review of Computer II and ONA Safeguards and Requirements*, Federal Communications Commission, CC Docket No. 02-33, 95-20, 98-10, May 3, 2002, p. 5; “Comments of Cbeyond, et al.,” *In the Matter of Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities, Universal Service Obligations of Broadband Providers, Computer III Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review – Review of Computer II and ONA Safeguards and Requirements*, Federal Communications Commission, CC Docket No. 02-33, 95-20, 98-10, May 3, 2002 (Hereafter Cbeyond, et al., 2002), pp. 27-28.

^{lx} National Research Council report entitled *Broadband: Bringing Home the Bits*, (Washington, D.C.: National Academy Press, 2002), pp. 21, 152-154.

^{lxi} Federal Communications Commission, High-Speed Services for Internet Access, June 2003, Tables 1, 2; Local Telephone Competition: Status as of December 31, 2002, June 2003, Tables 1, 13; NCTA, Overview 2003: Mid-Year, p. 1.

^{lxii} Young, Shawn and Peter Grant, "How Phone Firms Lost to Cable in Consumer Broadband Battle," *Wall Street Journal*, March 13, 2003.

^{lxiii} "Comments of Ad Hoc Telecommunications Users Committee," *In the Matter of Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services*, Federal Communications Commission, CC Docket No. 01-337, March 1, 2002, pp. 18-19.

Cable modem service presents serious security and reliability issues that, while present for residential users, are of far greater concern when used to support business applications... In addition, service quality for cable modem service not equivalent to ILEC standards... Additionally cable modem transmission speeds are not consistent, due to the "shared platform" architecture... Finally, cable modem platforms do not offer business customers a sufficient level of security

^{lxiv} Cable modem service presents serious security and reliability issues that, while present for residential users, are of far greater concern when used to support business applications... In addition, service quality for cable modem service is not equivalent to ILEC standards... Additionally cable modem transmission speeds are not consistent, due to the "shared platform" architecture... Finally, cable modem platforms do not offer business customers a sufficient level of security.

^{lxv} Kuhl, Craig, "Writing the Business Case for VDSL," *CED*, April 2000. Extensive documentation of the technology difference is provided in Cooper, Mark, *Transforming the Information Superhighway into a Private Toll Road* (Washington, DC: Consumer Federation of America, October 1999).

^{lxvi} Hazlett, Thomas W. and George Bittlingmayer. *The Political Economy of Cable "Open Access."* Joint Center, Working Paper 01-06, May, argue that there is a strategic under allocation of capacity to high-speed Internet.

^{lxvii} Cox, Comcast and ESPN also focus on a short time frame.

^{lxviii} Federal Communications Commission, *Report on Cable Prices*, In the Matter of Implementation of Section 3 of the Cable Television Consumer Protection Act of 1992, Statistical Report on Average Rates for Basic Service, Cable Programming and Equipment, MM Docket No. 92-226, January 2, 1997, p. 7.

^{lxix} *Id.*, p. 7.

^{lxx} U.S. GAO, 2003, p. 26.

^{lxxi} Federal Communications Commission, *In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, Fifth Annual Report, December 23, 1998, Table B-7; Ninth Annual Report, December 2002, Table 4.

^{lxxii} I report both revenue per subscriber and the total revenue because some costs are not incurred on a per subscriber basis.

^{lxxiii} Cox II, p. 8.

^{lxxiv} The GAO cautions that it is difficult to apportion capital costs between the traditional video business and the new lines of business. The same is true with operating expenses. The expert for Cox, recognizes the problem, but conveniently punts. Cox II, p. 8,

In particular, it seems likely that a relatively large share of increased capital costs and perhaps also operating costs may have been incurred in order to permit firms to offer more advanced products than expanded basic service, such as digital tiers of service (including pay per view and video on demand), broadband internet connections and telephony.

In my opinion, any attempt to allocate a portion of those costs increases to basic analog service (in order to determine if prices for expanded basic service have risen by more than would have been

sufficient to cover all cost increases of expanded basic service) would require a long list of assumptions which would be open to question and controversy.

^{lxxv} Federal Communications Commission, *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, Ninth Annual Report, p. 15; Seventh Annual Report; NCTA, *Cable Pricing: Value and Cost*, May 2003.

^{lxxvi} Federal Communications Commission, *In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, Fifth Annual Report, December 23, 1998, Table C-1; Ninth Annual Report, December 2002, Table B-1.

^{lxxvii} NCTA, Overview 2003: Mid-Year, p. 12.

^{lxxviii} ESPN, p. 12.

^{lxxix} Hazlett.

^{lxxx} Thinking about the cost of viewing to the public leads to another conceptual problem in the NCTA and Comcast analyses, one that has been recently highlighted by the ESPN analysis. ESPN points out they improve quality and increase audiences to increase their ability to sell advertising, as well as get more subscription revenues. Cox II, p. 6, nets advertising out from the cost of programming cable operators incur. That may make sense from the cable operator point of view, but not necessarily from the consumer point of view. Consumers have to watch the commercials and, ultimately, the cost turns up in the goods and services they buy. From a total social welfare analysis, the cost of advertising needs to be attributed to the cost of the total viewing time. The advertising revenue can be handled in a variety of ways, but it cannot be ignored.

^{lxxxi} Unfortunately, in 1996 the FCC shifted from a January cable price to a June cable price in its annual reports on cable prices. However, we can use the CPI to interpolate from June to January and only slightly underestimate the actual price increase (since quality adjustments over any short six month period are relatively minor). To the extent the industry was adding channels, this approach underestimates the price increase.

^{lxxxii} Cox, Appendix.

^{lxxxiii} Cox, p. 13

^{lxxxiv} Cox, p. 13,

since regulation is costly and can create other distortions, the fact that this type of bundling cannot be shown to be systematically harmful to consumers is sufficient reason for most economists to conclude that there is no reason to regulate this type of bundling

^{lxxxv} The example offered by Cox assumes that all fruits and vegetables are equally valuable to consumers in exactly the same quantities.

^{lxxxvi} Levy, Jonathan, Marcelino Ford-Levine and Anne Levine, *Broadcast Television: Survivor in a Sea of Competition* (Federal Communications Commission, OPP Working Paper, September 2002), p. 62; Albararan, Alan and Angel Arrese, "Time and Media Markets: An Introduction," in Albararan and Arrese (Eds.), *Time and Media Markets* (Mahwah, NJ: Lawrence Earlbaum Associates, 2003), p. 2.

^{lxxxvii} Veronis Suchler Stevenson, *Communications Industry Report: Forecast Summary, 2003*, p. 48.

^{lxxxviii} The explanations that cable industry executives gave the GAO for the social welfare superiority of bundling assume that advertisers irrationally pay for homes passed, rather than eyeballs watching, and that consumers maximize their welfare by subsidizing their neighbor's viewing habits. Those claims are inconsistent with the data in this paper (U.S. GAO, 2003, pp. 34-37).

^{lxxxix} Deutsche Bank, *Walt Disney Company*, October 27, 2003.

^{xc} This assumes that the non-avid sports fans would pay nothing for it, given the choice.

^{xci} Cooper, 2002, pp. 26-32.

^{xcii} USPIRG, *The Failure of Cable Deregulation: A Blueprint for Creating a Competitive, Pro-consumer Cable Television Marketplace* (August 2003), pp. 18-19.

